SEQUENCE LISTING

<110> Barbas, Carlos Dreier, Birgit

<120> Zinc Finger Binding Domains for Nucleotide Sequence ANN COPY OF PAPERS ORIGINALLY FILED

<130> TSRI 760.0

<140> US 09/791,106

<141> 2001-02-21

<160> 113

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthesized

<400> 1

Lys Ser Ala Asp Leu Lys Arg
1 5

<210> 2 <211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthesized

<400> 2

Arg Ser Asp His Leu Thr Thr

1

<210> 3

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthesized

-400- 3

Arg Ser Asp Glu Leu Lys Arg

1

5

```
<210> 4
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 4
Lys Ser Ala Asp Leu Lys Arg
<210> 5
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 5
Arg Ser Asp His Leu Thr Thr
<210> 6
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 6
Thr Ser Gly Asn Leu Val Arg
<210> 7
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 7
Ser Thr Asn Thr Lys Leu His Ala
<210> 8
<211> 8
<212> PRT
<213> Artificial Sequence
```

```
<220>
<223> synthesized
<400> 8
Ser Ser Asp Arg Thr Leu Arg Arg
<210> 9
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 9
Ser Thr Lys Glu Arg Leu Lys Thr
<210> 10
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 10
Ser Gln Arg Ala Asn Leu Arg Ala
             5
1 .
<210> 11
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 11
Ser Ser Pro Ala Asp Leu Thr Arg
                5
 1
<210> 12
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
 <223> synthesized
 <400> 12
 Ser Ser His Ser Asp Leu Val Arg
```

```
<210> 13
<211> 8
<212> PRT
<213> Artificial Sequence
<223> synthesized
<400> 13
Ser Asn Gly Gly Glu Leu Ile Arg
<210> 14
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 14
Ser His Gln Leu Ile Leu Leu Lys
<210> 15
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 15
Ser Ser Arg Met Asp Leu Lys Arg
 1
 <210> 16
 <211> 8
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> synthesized
 <400> 16
 Ser Arg Ser Asp His Leu Thr Asn
              5
 <210> 17
```

<211> 8

```
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 17
Ser Gln Leu Ala His Leu Arg Ala
                5
<210> 18
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 18
Ser Gln Ala Ser Ser Leu Lys Ala
1
                5
<210> 19
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 19
Ser Gln Lys Ser Ser Leu Ile Ala
<210> 20
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 20
 Ser Arg Lys Asp Asn Leu Lys Asn
 1
 <210> 21
 <211> 8
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> synthesized
```

```
<400> 21
 Ser Asp Ser Gly Asn Leu Arg Val
 1
 <210> 22
 <211> 8
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> synthesized
 <400> 22
 Ser Asp Arg Arg Asn Leu Arg Arg
 <210> 23
 <211> 8
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> synthesized
 <400> 23
 Ser Asp Lys Lys Asp Leu Thr Arg
                5
<210> 24
<211> 8
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> synthesized
 <400> 24
 Ser Asp Ala Ser His Leu His Thr
 <210> 25
 <211> 8
 <212> PRT
 <213> Artificial Sequence
 <223> synthesized
 <400> 25
 Ser Thr Asn Thr Gly Leu Lys Asn
 1 5
```

```
<210> 26
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 26
Ser Thr Arg Met Ser Leu Ser Thr
<210> 27
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 27
Ser Asn His Asp Ala Leu Arg Ala
<210> 28
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 28
Ser Arg Arg Ser Ala Cys Arg Arg
       5
<210> 29
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
 <400> 29
 Ser Arg Arg Ser Ser Cys Arg Lys
                 5
 <210> 30
 <211> 8
 <212> PRT
<213> Artificial Sequence
```

```
<220>
<223> synthesized
<400> 30
Ser Arg Ser Asp Thr Leu Ser Asn
1
<210> 31
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 31
Ser Arg Met Gly Asn Leu Ile Arg
<210> 32
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 32
Ser Arg Thr Asp Thr Leu Arg Asp
<210> 33
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 33
Ser Arg Ala His Asp Leu Val Arg
1
                5
<210> 34
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 34
```

```
Ser Arg Ser Asp His Leu Ala Glu
1 5
<210> 35
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 35
Ser Arg Arg Asp Ala Leu Asn Val
               5
<210> 36
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 36
Ser Thr Thr Gly Asn Leu Thr Val
                5
<210> 37
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 37
Ser Thr Ser Gly Asn Leu Leu Val
                5
1
<210> 38
<211> 8
<212> PRT
<213> Artificial Sequence
 <220>
 <223> synthesized
 <400> 38
 Ser Thr Leu Thr Ile Leu Lys Asn
```

. 9 .

<210> 39

```
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 39
Ser Arg Met Ser Thr Leu Arg His
<210> 40
<211> 8
<212> PRT
<213> Artificial Sequence
<223> synthesized
<400> 40
Ser Thr Arg Thr Asp Leu Leu Arg
1 5
<210> 41
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 41
Ser Thr Lys Thr Asp Leu Lys Arg
               5
<210> 42
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 42
 Ser Thr His Ile Asp Leu Ile Arg
               5
1
<210> 43
<211> 8
<212> PRT
<213> Artificial Sequence
```

<220>

```
<223> synthesized
<400> 43
Ser His Arg Thr Thr Leu Leu Asn
<210> 44
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 44
Ser Thr Ser His Gly Leu Thr Thr
               5
<210> 45
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 45
Ser His Lys Asn Ala Leu Gln Asn
1 5 .
<210> 46
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 46
Gln Arg Ala Asn Leu Arg Ala
1 5
<210> 47
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 47
Asp Ser Gly Asn Leu Arg Val
```

5

8 ...

1

```
<210> 48
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 48
Arg Ser Asp Thr Leu Ser Asn
               5
<210> 49
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 49
Thr Thr Gly Asn Leu Thr Val
             5
<210> 50
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 50
Ser Pro Ala Asp Leu Thr Arg
<210> 51
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 51
Asp Lys Lys Asp Leu Thr Arg
1
<210> 52
<211> 7
<212> PRT
```

```
<213> Artificial Sequence
<220>
<223> synthesized
<400> 52
Arg Thr Asp Thr Leu Arg Asp
<210> 53
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 53
Thr His Leu Asp Leu Ile Arg
               5
<210> 54
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 54
Gln Leu Ala His Leu Arg Ala
               5
<210> 55
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 55
Arg Ser Asp His Leu Ala Glu
1
<210> 56
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
```

<400> 56 His Arg Thr Thr Leu Leu Asn 1 <210> 57 <211> 7 <212> PRT <213> Artificial Sequence <220> <223> synthesized <400> 57 Gln Lys Ser Ser Leu Ile Ala <210> 58 <211> 7 <212> PRT <213> Artificial Sequence <220> <223> synthesized <400> 58 Arg Arg Asp Ala Leu Asn Val 1 <210> 59 <211> 7 <212> PRT <213> Artificial Sequence <220> <223> synthesized <400> 59 His Lys Asn Ala Leu Gln Asn <210> 60 <211> 7 <212> PRT <213> Artificial Sequence <220> <223> synthesized <400> 60 Arg Ser Asp Asn Leu Ser Asn 5 1

```
<210> 61
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 61
Arg Lys Asp Asn Leu Lys Asn
<210> 62
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 62
Thr Ser Gly Asn Leu Leu Val
<210> 63
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 63
Arg Ser Asp His Leu Thr Asn
1 5
<210> 64
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 64
His Arg Thr Thr Leu Thr Asn
                5
<210> 65
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
<223> synthesized
<400> 65
Ser His Ser Asp Leu Val Arg
<210> 66
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 66
Asn Gly Gly Glu Leu Ile Arg
<210> 67
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 67
Ser Thr Lys Asp Leu Lys Arg
<210> 68
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 68
Arg Arg Asp Glu Leu Asn Val
 1
<210> 69
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> synthesized
 <400> 69
 Gln Ala Ser Ser Leu Lys Ala
```

5

```
<210> 70
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> synthesized
 <400> 70
 Thr Ser His Gly Leu Thr Thr
 <210> 71
 <211> 7
 <212> PRT
 <213> Artificial Sequence
<220>
 <223> synthesized
 <400> 71
 Arg Glu Asp Asn Leu His Thr
 <210> 72
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> synthesized
 <400> 72
                                                                    18
accggagaaa ccagggga
<210> 73
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> synthesized
 <400> 73
                                                                    18
 atcgaggcaa gagccacc
 <210> 74
 <211> 18
 <212> DNA
 <213> Artificial Sequence
```

• 17 •

\* \* \* \*

<220>

```
<400> 74
                                                                    18
gccgcagcag ccaccaat
<210> 75
<211> 18
<212> DNA
<213> Artificial Sequence
. <220>
<223> synthesized
<400> 75
                                                                    18
atgtagagaa aaaccagg
<210> 76
<211> 9
<212> DNA
<213> Artificial Sequence
<220>
<223> synthesized
<400> 76
                                                                    9
gcgtgggcg
<210> 77
<211> 7
 <212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
 <400> 77
 Ser Pro Ala Asp Leu Thr Asn
 <210> 78
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> synthesized
 <400> 78
 His Ile Ser Asn Phe Cys Arg
 1
 <210> 79
 <211> 7
 <212> PRT
```

<223> synthesized

<213> Artificial Sequence

. . .

```
<220>
<223> synthesized
<400> 79
Arg Ser Asp His Leu Thr Thr
<210> 80
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 80
Asp Ala Ser His Leu His Thr
1 5
<210> 81
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 81
Arg Arg Ser Ala Cys Arg Arg
<210> 82
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 82
Glu Arg Ser Lys Leu Ala Arg
1
<210> 83
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 83
```

```
Asp Pro Gly His Leu Val Arg
<210> 84
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 84
Asp Pro Gly Ala Leu Val Arg
<210> 85
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 85
Glu Arg Ser Lys Leu Arg Ala
<210> 86
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 86
Asp Pro Gly His Leu Arg Val
             5
 1
<210> 87
 <211> 7
 <212> PRT
 <213> Artificial Sequence
<220>
 <223> synthesized
 <400> 87
 Asp Pro Gly Ala Leu Arg Val
```

<210> 88

```
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
 <400> 88
 Asp Pro Gly Ser Leu Arg Val
 <210> 89
 <211> 7
 <212> PRT
 <213> Artificial Sequence
<220>
 <223> synthesized
 <400> 89
 Val Lys Asp Tyr Leu Thr Lys
 <210> 90
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> synthesized
 <400> 90
 Lys Asn Trp Lys Leu Gln Ala
 <210> 91
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> synthesized
 <400> 91
 Ala Gln Tyr Met Leu Val Val
 1
<210> 92
 <211> 7
 <212> PRT
 <213> Artificial Sequence
<220>
```

```
<223> synthesized
<400> 92
Gln Ser Thr Asn Leu Lys Ser
1 5
<210> 93
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 93
Leu Asp Phe Asn Leu Arg Thr
<210> 94
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 94
Arg Lys Asp Asn Met Thr Ala
<210> 95
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 95
Gln Ser Ser Asn Leu Ile Thr
<210> 96
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 96
Gln Arg Ser Ala Leu Thr Val
1
```

```
<210> 97
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 97
Gln Ser Gly Ser Leu Thr Arg
1
<210> 98
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 98
Gln Gly Ser Arg Gly Cys Ala Cys
<210> 99
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 99
His Ile Ser Asn Phe Cys Arg
1
<210> 100
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 100
His Lys Asn Ala Leu Gln Asn
<210> 101
<211> 18
<212> DNA
```

<213> Artificial Sequence	
<220>	
<223> synthesized	
<400> 101	
accggagaaa ccagggga	18
<210> 102	
<211> 18	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> synthesized	
<400> 102	
atcgaggcaa gagccacc	18
<210> 103	
<211> 18	
<212> DNA <213> Artificial Sequence	
(21) Artificial Sequence	
<220>	
<223> synthesized	
<400> 103	
gccgcagcag ccaccaat .	18
<210> 104	
<211> 46	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> synthesized	
<400> 104	46
gaggaagttt gccaccagtg gcaacctggt gaggcatacc aaaatc	40
<210> 105	
<211> 24	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> synthesized	
<400> 105	
gtaaaacgac ggccagtgcc aagc	24
<210> 106 <211> 34	
<211> 34 <212> DNA	
<213> Artificial Sequence	

```
<220>
<223> synthesized
<221> misc_feature
<222> 7, 8, 9
<223> n = A,T,C or G
<221> misc_feature
<222> 26, 27, 28
<223> n = A,T,C or G
<400> 106
                                                                   34
ggccgcnnna tcgagttttc tcgatnnngc ggcc
<210> 107
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 107
Gln Ser Ser His Leu Val Arg
 1
<210> 108
<211> 7
 <212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 108
Gln Ser Ser Asn Leu Val Arg
<210> 109
<211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> synthesized
 <400> 109
 Asp Pro Gly Ala Leu Arg Val
 1
 <210> 110
 <211> 7
```

<212> PRT

<213> Artificial Sequence

```
<220>
<223> synthesized
<400> 110
Arg Ser Asp Asn Leu Val Arg
1
<210> 111
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 111
Gln Ser Gly Asp Leu Arg Arg
<210> 112
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 112
Asp Cys Arg Asp Leu Ala Arg
<210> 113
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> synthesized
<400> 113
Arg Arg Ser Ser Cys Arg Lys
```